

# Claims

[c1] What is claimed is:

1.A method for a thermal printer, the method comprising:

(a)distributing grayscales of dye blocks in each of a plurality of color blocks to be printed as an image on a medium according to grayscales of the image to be printed on the medium and a predetermined printing rule;

(b)transferring the dyes of the dye blocks in the plurality of color blocks to the medium to generate the image according to the distribution in (a); and

(c)transferring dyes of an overcoating block of a last color block of the plurality of color blocks to the medium;

wherein the thermal printer comprises a transferring ribbon comprising a plurality of color blocks, each of which comprising at least one dye block.

[c2] 2.The method of claim 1, in which each color block of the transferring ribbon comprises a yellow dye block, a magenta dye block, and a cyan dye block.

[c3] 3.The method of claim 1, in which each color block of

the transferring ribbon comprises a black dye block.

[c4] 4.The method of claim 1, in which only the color block utilized in step (c) of the transferring ribbon comprises an overcoating block.

[c5] 5.The method of claim 1, in which each color block of the transferring ribbon comprises an overcoating block.

[c6] 6.A thermal printer comprising:  
a thermal print head;  
a transferring ribbon comprising a plurality of color blocks, each of which comprises at least one dye block;  
a logic unit capable of performing the following steps:  
(a)distributing grayscales of dye blocks in each of a plurality of color blocks to be printed as an image on a medium according to grayscales of the image to be printed on the medium and a predetermined printing rule;  
(b)controlling the print heat to transfer the dyes of the dye blocks in the plurality of color blocks to the medium to generate the image according to the distribution in (a); and  
(c)controlling the print heat to transfer dyes of an overcoating block of a last color block of the plurality of color blocks to the medium; and  
a control circuit capable of controlling operations of the

thermal printer.

- [c7] 7.The thermal printer of claim 6, in which each color block of the transferring ribbon comprises a yellow dye block, a magenta dye block, and a cyan dye block.
- [c8] 8.The thermal printer of claim 6, in which each color block of the transferring ribbon comprises a black dye block.
- [c9] 9.The thermal printer of claim 6, in which only the color block utilized in step (c) of the transferring ribbon comprises an overcoating block.
- [c10] 10.The thermal printer of claim 6, in which each color block of the transferring ribbon comprises an overcoating block.
- [c11] 11.The thermal printer of claim 6, in which the logic unit is a logic circuit.
- [c12] 12.The thermal printer of claim 6, in which the logic unit is a program code stored in a memory of the thermal printer.
- [c13] .